

J-BHI Special Issue on “Emotion-Aware Intelligent Systems for Sustainable Healthcare Practices”

In recent times, digital healthcare and remote health monitoring technologies have become an integral part of the global healthcare sector. However, healthcare professionals strongly recognize that several factors play an essential role in eliciting positive feedback about connected healthcare systems among society. It is most important that wearable and mobile healthcare devices should establish a more connected relationship with the end-users. Given this opportunity, healthcare professionals would benefit from analyzing how the patients experience the remote healthcare services from an emotional perspective. In this special issue, we try to focus on the issue of simulation of natural intelligence across digital healthcare systems from a human-machine collaboration perspective. Finding appropriate solutions using which the E-health applications can stay ahead of the competitive environment, leading to the emergence of new tools and technologies and their impact on future healthcare applications. Here comes the major research question. How come we actually achieve this objective? Exactly by using emotion-aware intelligent systems, we can easily develop the emotion recognition model that analyzes patient emotions and their health requirements.

Emotional aware artificial intelligence (AI), also called facial coding, consists of a set of algorithms that tracks human emotions by interpreting facial expressions. It easily tracks a person's emotion from the slight lowering of the eyes to the tiniest smile and crinkling of the nose. And whether it's happiness or fear or anger, the emotion conveyed through facial expression acts as a universal language to monitor patients' remote and connected healthcare monitoring systems. With emotion tracking, healthcare professionals can easily find the patient's engagement towards the diagnostic plan and easily assist them during emergencies. Further, the potential of emotion detection in mobile health monitoring applications and smart healthcare systems will create a significant breakthrough. This is because emotion-aware, intelligent systems can easily identify frustrated patients and help them to follow up with their healthy lifestyle practices. As a matter of fact, emotion-aware intelligent systems have become an important part of the healthcare sector because of their impact on effectively treating patients. However, it has a long way to go in healthcare to perfectly recognize patient emotions. Besides, the risk of capturing and using patient emotional data needs to be better understood, particularly for early diagnosis of diseases, establishing efficient communication with the patients, and assisting them during emergencies. Leveraging advanced research in this background is essential to effectively handle risk and challenges associated with emotion-aware intelligent systems in healthcare. However, a more detailed analysis in this scope will lead to sustainable healthcare practices. This special section covers research, development, and application of emotion-aware intelligent systems for all aspects of healthcare systems. Topics of interest include, but are not limited to:

- Effective ways of humanizing healthcare applications with emotion-aware artificial intelligence approaches
- Future of healthcare with emotion-aware intelligent systems
- Protection, restoration, and security of emotional data captured from healthcare application
- Innovative emotion recognition software and tools for E-health applications
- Deep learning and computer for visualizing emotion recognition models in healthcare
- Tele monitoring and emotion-aware intelligent systems
- Advances in human speech signal processing
- Transformative technologies for emotion-aware healthcare applications
- Intelligent frameworks and protocols for emotion-aware healthcare applications
- Emotion aware intelligent systems to effectively assist patients with epidemic diseases
- Achieving the goals of sustainable healthcare practices with emotion-aware intelligent systems
- Potential applications of AI technologies and emotional intelligence in healthcare

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